

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/005268

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl.<sup>7</sup> H04B1/707, 1/10, H04J1/14, H04L27/38

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.<sup>7</sup> H04B1/707, 1/10, H04J1/14, H04L27/38

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2005
Kokai Jitsuyo Shinan Koho	1971-2005	Toroku Jitsuyo Shinan Koho	1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 2003-87218 A (Matsushita Electric Industrial Co., Ltd.), 20 March, 2003 (20.03.03), Figs. 2, 3, 5 & US 2003/0179776 A1 25 September, 2003 (25.09.03) & EP 1401133 A1 24 March, 2004 (24.03.04) & CN 1465150 A 31 December, 2003 (31.12.03) & JP 2004-357339 A 16 December, 2004 (16.12.04) & WO 2003/003634 A1 09 January, 2003 (09.01.03)	1-3, 5-9 4, 10, 11

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
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- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search  
24 May, 2005 (24.05.05)Date of mailing of the international search report  
07 June, 2005 (07.06.05)Name and mailing address of the ISA/  
Japanese Patent Office

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PCT/JP2005/005268

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP H11-8604 A (Hitachi Denshi, Ltd.), 12 January, 1999 (12.01.99), Claim 3 & JP 2004-242366 A 26 August, 2004 (26.08.04) & JP 3565537 B2 15 September, 2004 (15.09.04)	1-3, 5-9 4, 10, 11
Y A	JP 2002-94402 A (Hitachi, Ltd.), 29 March, 2002 (29.03.02), Fig. 1 (Family: none)	1-3, 5-9 4, 10, 11
Y A	JP H9-153882 A (Victor Company Of Japan, Ltd.), 10 June, 1997 (10.06.97), Fig. 3 & US 6009073 A 28 December, 1999 (28.12.99) & JP 2001-119364 A 27 April, 2001 (27.04.01) & CN 1158040 A 27 August, 1997 (27.08.97) & EP 765059 B1 04 December, 2002 (04.12.02) & DE 69625150 E 16 January, 2003 (16.01.03) & EP 765059 A2 26 March, 1997 (26.03.97)	1-3, 5-9 4, 10, 11
Y A	JP H6-291553 A (Mitsubishi Electric Corp.), 18 October, 1994 (18.10.94), Fig. 1 (Family: none)	3 1, 2, 4-11
Y A	JP 2000-232325 A (Japan Radio Co., Ltd.), 22 August, 2000 (22.08.00), Fig. 2 (Family: none)	3 1, 2, 4-11
A	JP H3-268616 A (Nippon Telegraph And Telephone Corp.), 29 November, 1991 (29.11.91), Fig. 1 (Family: none)	4
Y A	JP 2002-44064 A (Matsushita Electric Industrial Co., Ltd.), 08 February, 2002 (08.02.02), Claim 4 (Family: none)	6 1-5, 7-11

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International application No.

PCT/JP2005/005268

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 2003-179530 A (Alps Electric Co., Ltd.), 27 June, 2003 (27.06.03), Fig. 1; Par. No. [0096] & JP 2003-179531 A 27 June, 2003 (27.06.03) & US 2003/0109242 A1 12 June, 2003 (12.06.03) & EP 1318641 A2 11 June, 2003 (11.06.03)	8, 9 1-7, 10, 11
Y A	JP 2001-268145 A (NEC Corp.), 28 September, 2001 (28.09.01), Fig. 1 & GB 2360408 A 19 September, 2001 (19.09.01) & US 2001/0022821 A1 20 September, 2001 (20.09.01) & GB 2360408 B 24 December, 2003 (24.12.03) & JP 3531571 B2 31 May, 2004 (31.05.04)	9 1-8, 10, 11
Y A	JP 2002-44175 A (Japan Radio Co., Ltd.), 08 February, 2002 (08.02.02), Fig. 1 & JP 350817 B2 02 March, 2004 (02.03.04)	9 1-8, 10, 11
A	JP 2001-156726 A (Hitachi Kokusai Electric Inc.), 08 June, 2001 (08.06.01), Fig. 1 (Family: none)	10